

ARL is an Authority on Nutrition and the Science of Balancing Body Chemistry Through Hair Tissue Mineral Analysis!

Hair Tissue Mineral Analysis

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Mineral Patterns in Infants

Analytical Research Laboratories performs many mineral analyses on babies and infants under two years of age. These tests often reveal high toxic metal levels and extremely low sodium/potassium ratios. Let us explore the interpretation of infants' hair analyses.

Toxic Metals

One of the most prevalent findings in infants is high levels of toxic metals. Elevated lead, cadmium and aluminum are among the common findings. One wonders where these have come from, especially in infants who have been exclusively breast fed.

There are two reasons for high toxic metal levels. First, the metals are apparently congenital, present at birth. This is not the same as hereditary, which means built into the genes. Congenital means the metals are in the tissues at the time of birth.

Heavy metals are known to be passed from mother to child through the placenta. Indeed, one neurotoxicology book describes babies as "sinks" for heavy metals. Heavy metals such as cadmium and lead can substitute in enzyme binding sites for vital minerals such as calcium and zinc. If a mother is deficient in the essential minerals, the infant will take whatever it can get, so to speak.

This is a good reason why young women need to be aware of their nutritional intake and most would benefit from a nutritional balancing program to eliminate toxic metals *before* they become pregnant. Heavy metals could come from the father, if he smokes or if he works with metals and brings them home on his clothes, thus exposing his wife to them.

When children are involved, common practices such as smoking cigarettes and eating junk food have consequences far beyond the person indulging in the behavior.

A second reason toxic metals often show up in infants is that most infants have a very fast oxidation rate. As a result, they eliminate heavy metals rapidly through the hair. Adults have toxic metals also. However, they have slower oxidation rates. Adults may require months or even years on a health-building program in order for toxic metals to be revealed on a hair analysis as they are being eliminated from tissue storage sites.

Sodium/Potassium Inversions

A common finding in the hair tests of infants is a very low sodium/potassium ratio. Such a low ratio is associated with a tendency for infections, stress on the liver and kidneys, sugar intolerance and extreme chronic stress.

Infants appear to tolerate these low ratios better than adults, although they are always a cause for concern. It is true that fast oxidizers, more often than not, have low sodium/potassium ratios, however, this alone does not account for the ratios seen on many infants' hair analyses.

Newborn Burnout

One reason for a very low sodium/potassium ratio, or inversion, is that infants are under extreme stress, or even in a burnout state by the age of two. One might ask how this is possible, since the life of a baby or toddler appears quite simple. We are not talking about abused or neglected children.

The Stress and Burnout Originates From Several Sources

- Nutritional stress is caused by elevated toxic metals, essential nutrient deficiencies and other imbalances acquired at birth. Today these are *very* common, due to the poor biochemical condition of many mothers.
- Psychological stress in the mother and father during pregnancy and afterwards is felt by the baby.
- Birth stress may contribute to the problem. This may include a prolonged labor, the effects of drugs used during labor and delivery methods including bright lights, use of forceps, slapping the baby and other procedures. More humane birthing methods are becoming available, but are not the norm.
- Infants are working hard to adjust to a new body over which they have little control.
- Infants are growing and developing at an incredible rate each day.
- Infants must adjust to the schedules and demands of living with adults. Most adults understand little of the incredible sensitivity of newborns and the growth processes they are experiencing.
- Infants are totally helpless and dependent beings, with a very limited ability to articulate their needs. It is frightening to even consider what this must be like. Perhaps this is why most of us have blocked out this part of our lives from our conscious memories.

Unconditional Love

Some psychologists say the newborn child knows only pure love. It is a great stress for the child to be subject to what is called 'conditional love'. This is the notion that one is loved when one cooperates, eats on time, sleeps on time, smiles on cue and doesn't make too much noise.

When "bad" behavior occurs, love is withdrawn or punishment is given that often makes no sense to the child. Some adults attempt to explain what is going on to the child. Many adults simply repeat unconscious patterns of punishment they learned as children. Who wouldn't be under stress in such a situation?

The Perils Of Fast Oxidation

Fast oxidation in itself is a cause of stress. Calcium and magnesium act as stress buffering elements. They tend to reduce the fight-flight response or the alarm reaction. Low tissue calcium and magnesium levels found in most infants' means the infant has a reduced capacity to buffer stress. The child easily goes into a fight-flight mode, especially if there is any disturbance, noise, arguing or other stress factors present.

Once we consider the nutritional and emotional stress factors that infants' face, their unusual and often extreme hair analysis profiles begin to make sense.

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